

## INTERFERENCE INITIAL MEMORANDUM

Count # 1

BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:

This interference involves 2 parties

PARTY <b>HORIKAWA</b>	APPLICATION NO. <b>09/139,296</b>	FILING DATE <b>8/25/98</b>	PATENT NO., IF ANY	ISSUE DATE, IF ANY
If application has been patented, have maintenance fees been paid? <u>Yes</u> <u>No</u> Maintenance fees not due yet				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
<b>US</b>	<b>08/935,455</b>	<b>9/23/97</b>	<b>5,850,280</b>	<b>12/15/98</b>
<b>US</b>	<b>08/490,497</b>	<b>6/14/95</b>	<b>ABN</b>	
The claim(s) of this party which correspond(s) to this count is(are):				
PATENTED OR PATENTABLE PENDING CLAIMS <b>28, 30</b>		UNPATENTABLE PENDING CLAIMS <b>NONE</b>		
The claim(s) of this party which does(do) not correspond to this count is(are):				
PATENTED OR PATENTABLE PENDING CLAIMS <b>29, 31</b>		UNPATENTABLE PENDING CLAIMS <b>NONE</b>		
PARTY <b>LOOPSTRA et al.</b>	APPLICATION NO. <b>08/642,010</b>	FILING DATE <b>5/2/96</b>	PATENT NO., IF ANY <b>5,767,948</b>	ISSUE DATE, IF ANY <b>6/16/98</b>
If application has been patented, have maintenance fees been paid? <u>Yes</u> <u>No</u> <input checked="" type="checkbox"/> Maintenance fees not due yet				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
<b>N.A.</b>				
The claim(s) of this party which correspond(s) to this count is(are):				
PATENTED OR PATENTABLE PENDING CLAIMS <b>1</b>		UNPATENTABLE PENDING CLAIMS <b>NONE</b>		
The claim(s) of this party which does(do) not correspond to this count is(are):				
PATENTED OR PATENTABLE PENDING CLAIMS <b>2-18</b>		UNPATENTABLE PENDING CLAIMS <b>NONE</b>		
<b>Instructions</b>				
1. For every patent involved in the interference, check if the maintenance fees have been paid by using the patent number with PALM screen 2970. If fees are due and they have not been paid, the interference cannot be declared since it would involve an expired patent (35 USC 135(a); 37 CFR 1.606).				
2. For each party, identify the patentable (or patented) and unpatentable (pending) claims which correspond to the count (37 CFR 1.601(f), (n); 1.609(b)(2)).				
3. For each party, identify the patentable (or patented) and unpatentable (pending) claims which do not correspond to the count (37 CFR 1.609(b)(3)).				
4. <u>Forward all files including those the benefit of which is being accorded.</u>				
5. <u>Keep a copy of the Interference Initial Memorandum and any attachments for your records.</u>				
All information requested below must be attached on (a) separate <u>typewritten</u> sheet(s).				
6. On a separate sheet, set forth a single proposed interference count. If any claim of any party is exactly the same word for word as this count, please indicate the party, application or patent number, and the claim number.				
7. For each claim designated as corresponding to the count, provide an explanation of why each claim defines the same patentable invention as the count (37 CFR 1.609(b)(2)).				
8. For each claim designated as not corresponding to the count, provide an explanation of why each claim defines a separate patentable invention from the count (37 CFR 1.609(b)(3)).				
9. For each additional count, if any, repeat steps 2-6 and, additionally, provide an explanation why each count represents a separate patentable invention from every other count (37 CFR 1.609(b)(1)).				
DATE <b>11/29/99</b>	PRIMARY EXAMINER (Signature) <b>R. L. Moser</b>		TELEPHONE NO. <b>308-0752</b>	ART UNIT <b>2852</b>
DATE	GROUP DIRECTOR SIGNATURE (if required)			

\*\*The application number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest application if there are intervening applications necessary for continuity.

**THIS PAGE CAN BE DUPLICATED IF THERE ARE MORE THAN TWO INTERFERING PARTIES.**

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## INTERFERENCE INITIAL MEMORANDUM

Count # 2

BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:

This interference involves 2 parties

PARTY <b>HORIKAWA</b>	APPLICATION NO. <b>9/139,296</b>	FILING DATE <b>8/25/98</b>	PATENT NO., IF ANY	ISSUE DATE, IF ANY
If application has been patented, have maintenance fees been paid? <u>Yes</u> <u>No</u> <u>Maintenance fees not due yet</u>				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
<b>US</b>	<b>08/935,455</b>	<b>9/23/97</b>	<b>5,850,280</b>	<b>12/15/98</b>
<b>US</b>	<b>08/490,497</b>	<b>6/14/95</b>	<b>ABN</b>	
The claim(s) of this party which correspond(s) to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS <b>29,31</b>				
UNPATENTABLE PENDING CLAIMS <b>NONE</b>				
The claim(s) of this party which does(do) not correspond to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS <b>28,30</b>				
UNPATENTABLE PENDING CLAIMS <b>NONE</b>				
PARTY <b>LOOPSTRA et al</b>	APPLICATION NO. <b>08/642,010</b>	FILING DATE <b>5/2/96</b>	PATENT NO., IF ANY <b>5,767,948</b>	ISSUE DATE, IF ANY <b>6/16/98</b>
If application has been patented, have maintenance fees been paid? <u>Yes</u> <u>No</u> <u>Maintenance fees not due yet</u>				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
<b>N.A.</b>				
The claim(s) of this party which correspond(s) to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS <b>14</b>				
UNPATENTABLE PENDING CLAIMS <b>NONE</b>				
The claim(s) of this party which does(do) not correspond to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS <b>1-13, 15-18</b>				
UNPATENTABLE PENDING CLAIMS <b>NONE</b>				

**Instructions**

- For every patent involved in the interference, check if the maintenance fees have been paid by using the patent number with PALM screen 2970. If fees are due and they have not been paid, the interference cannot be declared since it would involve an expired patent (35 USC 135(a); 37 CFR 1.606).
- For each party, identify the patentable (or patented) and unpatentable (pending) claims which correspond to the count (37 CFR 1.601(f), (n); 1.609(b)(2)).
- For each party, identify the patentable (or patented) and unpatentable (pending) claims which do not correspond to the count (37 CFR 1.609(b)(3)).
- Forward all files including those the benefit of which is being accorded.
- Keep a copy of the Interference Initial Memorandum and any attachments for your records.

**All information requested below must be attached on (a) separate typewritten sheet(s).**

- On a separate sheet, set forth a single proposed interference count. If any claim of any party is exactly the same word for word as this count, please indicate the party, application or patent number, and the claim number.
- For each claim designated as corresponding to the count, provide an explanation of why each claim defines the same patentable invention as the count (37 CFR 1.609(b)(2)).
- For each claim designated as not corresponding to the count, provide an explanation of why each claim defines a separate patentable invention from the count (37 CFR 1.609(b)(3)).
- For each additional count, if any, repeat steps 2-6 and, additionally, provide an explanation why each count represents a separate patentable invention from every other count (37 CFR 1.609(b)(1)).

DATE <b>11/29/99</b>	PRIMARY EXAMINER (Signature) <b>R. L. Moses</b>	TELEPHONE NO. <b>308-0752</b>	ART UNIT <b>2852</b>
DATE	GROUP DIRECTOR SIGNATURE (if required)		

\*\*The application number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest application if there are intervening applications necessary for continuity.

**THIS PAGE CAN BE DUPLICATED IF THERE ARE MORE THAN TWO INTERFERING PARTIES.**

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\*\*\* APPLICATION INFORMATION DISPLAY \*\*\*

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DETAIL INFORMATION:

CONTENTS:

SC/SN: 09/139296  
 FLDT: 08/25/98  
 PATNO:  
 ISSDT: 00/00/00  
 ABNDT: 00/00/00  
 APPL: OHTOMO  
 PUBNO: F139296  
 PUBDT: 00/00/00  
 PGPUB CL/SC: /  
 LOC: 1711 LOCDT: 01/05/00 ET AL  
 CHG-LOC: 17F1 IE TEAM: 00 ISSNO: 00  
 CHGTO-NAME: NOT ASSIGNED  
 TOT ACT: 03 STATUS: 172 STADT: 12/22/99  
 RESP CD: L.SP START DT: 10/29/99 DUE DT: 01/31/00  
 EXMR NO/NAME: 60954/MOSES, RICHARD  
 DOCKET DATE: 03/19/99 GAU: 2852 L R CD: 01  
 ATTY DOCK #: 101809.01 LOST N LOST DT 00/00/00  
 APPLN TYPE: 1 TYPE SM ENT: 0 UNMAT PET: N  
 CURR CL/SC: 355/053.000 FOR PRIOR CL: Y PET FADM:  
 TITLE OF INVENTION: UNAVAIL FOR ACTION: N PP UNAVAIL:  
 STAGE UNIT, DRIVE TABLE, AND SCANNING EXPOSURE APPARATUS USING THE  
 SAME

END OF DISPLAY

TO DISPLAY CONTENTS: PUSH SEND

28 CTID E 12/22/99  
 27 L.SP 0 10/29/99  
 26 CTMS 0 10/29/99  
 25 M327 0 10/27/99  
 24 DOCK 0 09/29/99  
 23 M327 0 10/04/99  
 22 FMDX E 06/28/99  
 21 A... I 06/24/99  
 20 MAIL 0 04/22/99  
 19 CTNF F 04/21/99  
 18 DOCK 0 04/19/99  
 17 M844 I 04/07/99  
 16 DOCK 0 04/10/99  
 15 M570 0 03/19/99  
 14 DOCK 0 03/19/99  
 13 M570 0 03/18/99  
 0

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Attachment to initial memorandum including application S.N. 09/139,296 and U.S. Patent No. 5,767,948.

Summary of Interference

count 1 (corresponds to claim 30 of the party Horikawa)

A lithographic device comprising the following elements which are supported in that order.

a substrate stage which can be positioned by a first positioning device parallel to a first direction which is perpendicular to a vertical Z-direction and a second direction which is perpendicular to the first direction and to the Z-direction;

an imaging system with a main axis directed parallel to the Z-direction;

a mask stage which can be positioned parallel to the first direction by a second positioning device; and

an illumination optical system which irradiates an exposure illumination light beam;

wherein the mask stage is also positionable parallel to the second direction and rotatable about an axis of rotation which is parallel to the Z-direction by the second positioning device; and

wherein the second positioning device is provided with a first linear motor by means of which the mask stage can be positioned over comparatively small movement parallel to the first direction and the second direction and can be rotated about the axis of rotation of the mask stage

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and a second linear motor by means of which the mask stage can be positioned over comparatively great movement parallel to the first direction.--

Count 2 (corresponds to claim 31 of the party Horikawa)

A lithographic device comprising the following elements which are supported in that order:

a substrate stage which can be positioned by a first positioning device parallel to a first direction which is perpendicular to a vertical Z-direction and a second direction which is perpendicular to the first direction and to the Z-direction;

an imaging system with a main axis directed parallel to the Z-direction;

a mask stage which can be positioned parallel to the first direction by a second positioning device; and

an illumination optical system which irradiates an exposure illumination light beam;

wherein the mask stage is also positionable parallel to the second direction and rotatable about an axis of rotation which is parallel to the Z-direction by the second positioning device;

wherein the second positioning device is provided with a first linear motor by means of which the mask stage can be positioned over comparatively small movement parallel to the first direction and the second direction and can be rotated about the axis of rotations of the mask stage and a second linear motor by means of which the mask stage can be positioned over comparatively great movement parallel to the first direction; and

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wherein a magnet system and an electric coil system belong to the first linear motor, while the second linear motor comprises a stationary part and a movable part which is displaceable parallel to the first direction over a guide of the stationary part, the magnet system of the first linear motor being fastened to the mask stage and the electric coil system of the first linear motor being fastened to the movable part of the second linear motor.--

Explanation of why count 1 represents a separate patentable invention from count 2

Count 1 represents a separate patentable invention from count 2 since count 2 recites additional limitations which distinguish it from count 1. These additional limitations are directed the details of the first and second linear motors. The first linear motor has a magnet system fastened to the mask stage and an electric coil system fastened to a movable part of the second linear motor. Furthermore, the second linear motor comprises a stationary part and a movable part which are displaceable parallel to the first direction. These limitations recited in count 2 are not recited in count 1 and would not be obvious to one of ordinary skill in the art at the time the invention was made.

Application S.N. 09/139,296 (count 1)

Explanation of why claims correspond to count 1

Claim 28 corresponds to count 1 because it includes all the limitations recited in the count and in addition it is more limited in scope due to the directions being specified in terms of the "Y" and "X" coordinates in place of the broader "first" and "second" directions recited in the count.

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Claim 30 corresponds to count 1 because it is identical to count 1.

Explanation of why claims do not correspond to count 1

Claim 29 does not correspond to count 1 because it includes additional limitations which distinguish it from count 1. These additional limitations are directed to the details of the first and second linear motors. The first linear motor has a magnet system fastened to the mask stage and an electric coil system fastened to a movable part of the second linear motor. Furthermore, the second linear motor comprises a stationary part and a movable part which are displaceable parallel to the "Y" direction. These additional limitations of the first and second linear motors would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Claim 31 does not correspond to count 1 because it includes additional limitations which distinguish it from count 1. These additional limitations are directed to the details of the first and second linear motors. The first linear motor has a magnet system fastened to the mask stage and an electric coil system fastened to a movable part of the second linear motor. Furthermore, the second linear motor comprises a stationary part and a movable part which are displaceable parallel to the first direction. These additional limitations of the first and second linear motors would not have been obvious to one of ordinary skill in the art at the time the invention was made.

U.S. Patent No. 5,767,948

Explanation of why claims correspond to count 1

Claim 1 corresponds to count 1 because it includes all the limitations recited in the count and in addition it is more limited in scope due to the directions being specified in terms of the

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“Y” and “X” coordinates in place of the broader “first” and “second” directions recited in the count.

Explanation of why claims do not correspond to count 1

Claim 2 does not correspond to count 1 because it includes the additional limitations of a “force frame” which is dynamically isolated from the machine frame and which supports a stationary part of the second positioning device. The addition of these features to the device recited in the count would not be obvious to one of ordinary skill in the art at the time the invention was made.

Claim 3 does not correspond to count 1 because it contains all the limitations of claim 2.

Claim 4 does not correspond to count 1 because it contains the additional limitations of “a force actuation system” which exerts a compensation force having a mechanical moment about a reference point whose value is equal to a value of a mechanical moment of a force of gravity acting about said reference point. These limitations are not found within the count and would not be obvious to one of ordinary skill in the art at the time the invention was made.

Claim 5 does not correspond to count 1 because it contains the additional limitations of “a force actuation system” which exerts a compensation force having a mechanical moment about a reference point whose value is equal to the sum of a plurality of separate mechanical moments of force of gravity about said reference point. These limitations are not found within the count and would not be obvious to one of ordinary skill in the art at the time the invention was made.



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Claim 6 does not correspond to count 1 because it contains all the limitations of claim 4.

Claim 7 does not correspond to count 1 because it contains all the limitations of claim 3.

Claim 8 does not correspond to count 1 because it contains all the limitations of claim 2.

Claim 9 does not correspond to count 1 because it contains all the limitations of claim 3.

Claim 10 does not correspond to count 1 because it contains all the limitations of claim 2.

Claim 11 does not correspond to count 1 because it contains all the limitations of claim 3.

Claim 12 does not correspond to count 1 because it contains all the limitations of claim 4.

Claim 13 does not correspond to count 1 because it contains all the limitations of claim 5.

Claim 14 does not correspond to count 1 because it includes the additional limitations of “a stationary part” and “a movable part” which limitations are not included within the count and would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Claim 15 does not correspond to count 1 because it contains all the limitations of claim 14.

Claim 16 does not correspond to count 1 because it contains all the limitations of claim 14.

Claim 17 does not correspond to count 1 because because it contains all the limitations of claim 4.

Claim 18 does not correspond to count 1 because it contains all the limitations of claim 5.

Application S.N. 09/139,296 (count 2)

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Explanation of why claims correspond to count 2

Claim 29 corresponds to count 2 because it includes all the limitations recited in the count and in addition it is more limited in scope due to the directions being specified in terms of “Y” and “X” coordinates in place of the broader “first” and “second” directions recited in the count.

Claim 31 corresponds to count 2 because it is identical to count 2.

Explanation of why claims do not correspond to count 2

Claim 28 does not correspond to count 2 because it does not include the additional limitations directed to the details of the first and second linear motors which are recited in the count. For example, the first linear motor has a magnet system fastened to the mask stage and an election coil system fastened to a movable part of the second linear motor. Furthermore, claim 28 does not include the limitations of the second linear motor comprising a stationary part and a movable part, said movable part being displaceable parallel to the first direction over a guide of the stationary part.

Claim 30 does not correspond to count 2 because it does not include the additional limitation directed to the details of the first and second linear motors as outlined above.

U.S. Patent No. 5,767,948

Explanation of why claims correspond to count 2

Claim 14 corresponds to count 2 because it includes all the limitations recited in the count and in addition it is more limited in scope due to the directions being specified in terms of “Y” and “X” coordinates in place of the broader “first” and “second” directions recited in the count.

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Explanation of why claims do not correspond to count 2

Claim 1 does not correspond to count 2 because it does not include the additional limitations directed to the details of the first and second linear motors which are recited in the count. For example, the first linear motor has a magnet system fastened to the mask stage and an electric system fastened to a movable part of the second linear motor. Furthermore, claim 1 does not include the limitations of the second linear motor comprising a stationary part and a movable part, said movable part being displaceable parallel to the first direction over a guide of the stationary part. These limitations would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Claims 2-13, 17, 18 do not correspond to count 2 because they depend from claim 1 which does not include the limitations directed to the details of the first and second linear motors as recited in count 2 and as outlined above.

Claims 15, 16 do not correspond to count 2 because they include the additional limitations of a force actuator system for extending a compensation force on the machine frame during operation. These additional limitations would not be obvious to one of ordinary skill in the art at the time the invention was made.

Moses/dc  
December 2, 1999

*R. L. Moses*  
**Richard Moses**  
Primary Examiner

## INTERFERENCE TRAINING

29 April 1999

Instructor  
Fred E. McKelvey  
Senior Administrative Patent Judge

### A. What is an interference?

1. The statutory basis for an interference in the Patent and Trademark Office is 35 U.S.C. § 135(a).
2. An interference is defined in 37 CFR § 1.601(i) (1998).
  - a. An interference is a proceeding instituted in the Patent and Trademark Office before the Board of Patent Appeals and Interferences to determine priority of invention between two or more inventors claiming the same patentable invention. The board may also determine whether claims involved in the interference are patentable.
  - b. An interference may be declared between two or more pending applications naming different inventors when, in the opinion of an examiner, the applications contain claims for the same patentable invention.
  - c. An interference may be declared between (1) one or more pending applications and (2) one or more unexpired patents naming different inventors when, in the opinion of an examiner, any application and any unexpired patent contain claims for the same patentable invention. At least one application must be involved in an interference.

### B. What is meant by "same patentable invention?"

1. Invention "A" is the same patentable invention as invention "B" when invention "A" is
  - a. the same as (35 U.S.C. § 102) or
  - b. is obvious (35 U.S.C. § 103) in view of invention "B."

assuming invention "B" is prior art with respect to invention "A".

2. Invention "A" is a separate patentable invention with respect to invention "B" when invention "A" is

- (1) new (35 U.S.C. § 102) and
- (2) non-obvious (35 U.S.C. § 103) in view of invention "B."

assuming invention "B" is prior art with respect to invention "A".

See 37 CFR § 1.601(m) (1998).

**C. When is an interference to be declared?**

1. An interference is to be declared when there is a patentable claim in a first application which claims the same patentable invention as a claim of an unexpired patent or a patentable claim in a second application.

2. Normally, an interference is not declared when the filing dates of the parties are more than six months apart. An interference may be declared if the dates are less than six months apart.

3. If a patent has expired for failure to pay a maintenance fee, an interference cannot be declared involving that expired patent. Hence, when a patent is to be involved in an interference, the examiner should check (e.g., on PALM) to see if a maintenance fee, if due, has been paid. If a maintenance fee has been paid, a copy of the PALM report may be attached to the Rule 609(b) statement.

4. The claims of the first application and the claim of a patent or a second application need, and normally will, not be identical.

In fact, the claims of the parties need not overlap in scope. For example in Aelony v. Arni, 547 F.2d 566, 192 USPQ 486 (CCPA 1977), the former CCPA held that a method of using (1) cyclopentadiene was the same patentable invention as a method using (2) butadiene, (3) isoprene, (4) dimethylbutadiene, (5) piperylene, (6) anthracene, (7) perylene, (8) furan and (9) sorbic acid. There was no overlap in claim scope between Aelony's invention and Arni's invention.

**D. The count of an interference**

1. A count defines the interfering subject matter between two or more applications or between one or more applications and one or more patents. 37 CFR § 1.601(f) (1998)

2. At the time the interference is initially declared, the scope of the count should equal the sum of the scope of all of the claims that are patentable over the prior art and which are designated to correspond to the count.

3. When there is more than one count, each count shall define a separate patentable invention.

4. Any claim of an application or patent that is designated to correspond to a count is a claim involved in the interference within the meaning of 35 U.S.C. § 135(a).

5. A count is a vehicle for contesting priority and determines what evidence is relevant on the issue of priority. Squires v. Corbett, 560 F.2d 424, 194 USPQ 513, 519 (CCPA 1977).

**E. Rule 609(b) statement**

1. Rule 609 (37 CFR § 1.609) provides:

When the examiner determines that an interference should be declared, the examiner shall forward to the Board:

(a) All relevant application and patent files and

(b) A statement identifying:

(1) The proposed count or counts and, if there is more than one count proposed, explaining why the counts define different patentable inventions;

(2) The claims of any application or patent which correspond to each count, explaining why each claim designated as corresponding to a count is directed to the same patentable invention as the count;

(3) The claims in any application or patent which do not correspond to each count and explaining why each claim designated as not corresponding to any count is not directed to the same patentable invention as any count; and

(4) Whether an applicant or patentee is entitled to the benefit of the filing date of an earlier application and, if so, sufficient information to identify the earlier application.

2. When an examiner believes that an interference should be declared, then a Rule 609(b) statement should be prepared. The Rule 609(b) document is important because it lets the board

and the parties know why claims are considered to be directed to the same patentable invention.

**F. The proposed count or counts**

1. The proposed count in a Rule 609(b) statement should be set out in the alternative as

- a. the broadest patentable claim of the first application which will be designated as corresponding to the count

or

- b. the broadest patent claim or the broadest patentable claim of the second application which will be designated as corresponding to the count.

2. A photocopy of all pending claims (including unpatentable claims) in any application and all patent claims of any application and patent to be involved in the interference should be attached to the Rule 609(b) statement.

3. As applied to the Assignment, a count will consist of the two patentable inventions defined by Roe and Doe, i.e., Roe claim 2 (the broadest patentable Roe claim) and Doe claim 2 (the broadest patentable Doe claim in the second Doe application).

Since claim 1 of Roe and claim 1 of Doe are unpatentable, the count cannot include subject matter within the scope of either Roe claim 1 or Doe claim 2 unless the subject matter is also within the scope of Roe claim 2 and Doe claim 2.

4. The count would be:

A composition of matter in accordance with claim 2 of the Roe application (08/999,990)

or

a composition of matter in accordance with claim 2 of the Doe application (08/988,000).

5. There is no need to reproduce the claims in the Rule 609(b) statement, because the copy of all claims is attached to the Rule 609(b) statement. The Rule 609(b) statement and copy of the claims will be sent with the NOTICE DECLARING INTERFERENCE when it is mailed by the board.

6. If there are two or more counts, an explanation must be given in the Rule 609(b) statement why each count is patentably distinct from all other counts.

**G. Claims designated as corresponding to the count**

1. If a claim of a party defines the same patentable invention (37 CFR § 1.601(m)) as the count, then the claim will be designated as corresponding to the count. On the other hand, if the claim does not define the same patentable invention as the count, then it will be designated as not corresponding to the count.

2. In order to make a determination as to whether a claim defines the same patentable invention as the count, the examiner will assume that the portion of the count which represents the opponent's claim is prior art. As applied to the count set out above with respect to the Assignment, the examiner will assume that the subject matter of Doe claim 2 is prior art to Roe in determining what Roe claims should be designated as corresponding to the count. The examiner will then assume that the subject matter of Roe claim 2 is prior art to Doe in determining what Doe claims should be designated as corresponding to the count. The filing dates of Roe and Doe are not relevant, because Roe is assumed to be prior art to Doe and vice versa.

3. As applied to the Assignment, in determining whether Roe claims 1 and 3-9 correspond to the count, it will be assumed that the subject matter of Doe claim 2 is prior art to Roe. Likewise, in determining whether Doe claims 1 and 3-10 correspond to the count, it will be assumed that the subject matter of Roe claim 2 is prior art to Doe. NOTE: It is not assumed that Doe or Roe claim 1 is prior art because Doe claim 1 and Roe claim 1 cover both patentable and unpatentable subject matter.

4. In determining whether a claim is directed to the same patentable invention as a count, it is often necessary to consider the count in combination with other prior art. As applied to the Assignment, to determine whether Roe claim 3 (calling for the additional presence of Fe, Ni and Cu) is directed to the same patentable invention as Doe claim 2, it will be necessary to consider the combined effect of Doe claim 2 (presumed prior art) and the Masumoto patent.

a. If based on Doe claim 2 and Masumoto, an examiner is of the opinion that the subject matter of Roe claim 3 would have been obvious over the subject matter of Doe claim 2 and Masumoto, then Roe claim 3 will be designated as corresponding to the count. What is important is the rationale which supports the examiner's opinion. A rationale which would support an opinion that Roe claim 3 is directed to the same patentable invention



might be based on the description in Masumoto that at least one of Cr, Fe, Co, Ni or Cu can be present (col. 1, lines 49-51) and Masumoto's description of an amorphous alloy embodiment (col. 5, No. 21) with both Cr and Cu. Based on the noted portions of Masumoto, it can be argued that it would have been obvious to include Fe with Cr in the aluminum alloy, particularly when Hf or Nb is also present (see col. 3, lines 43-65, which indicates that the M elements improve ability to produce amorphous phase alloys when element X is also present).

b. If based on Doe claim 2 and Masumoto, an examiner is of the opinion that the subject matter of Roe claim 3 would not have been obvious over the subject matter of Doe claim 2 and Masumoto, then Roe claim 3 will be designated as not corresponding to the count. Again, what is important is the rationale which supports the examiner's opinion. A rationale which might support an opinion that it would not have been obvious to add Fe might be based on Roe Table I which shows that the addition of Fe (and Ni and Cu) results in alloys with corrosion resistance lower than the industry standard--a result which can be argued to be unexpected.

c. If the examiner is of the opinion that Roe claim 3 should not be designated as corresponding to the count, then a second count will be necessary given that both Roe and Doe describe addition of Fe, Ni and Cu to an Al/Cr alloy.

5. Each claim must be addressed separately and a rationale given as to why the claim should be designated as corresponding or as not corresponding to each count.

a. Doe claim 8 calls for the presence of Pb or Bi. Would it have been obvious to add Pb or Bi to the alloys of the count? Probably. According to Doe's specification, Pb or Bi can be added to the alloy "where free-machining grades of the aluminum alloy may be desired" (Second Doe Application, page 3, lines 15-17). The Clark prior art reference tells us that "[l]ead [Pb] and bismuth [Bi] are sometimes added to produce free-machining grades of aluminum alloys" (see page 421). Given that Doe adds Pb or Bi for a known purpose, it probably would have been obvious to add Pb or Bi for the same purpose to the Roe alloys. Accordingly, Doe claim 8 would be designated as corresponding to the count to which Doe claim 3 is designated as corresponding.

b. Roe claim 9 calls for the presence of Mg. Would it have been obvious to add Mg to the alloys of Doe? Probably not. It is true that Clark describes the addition of magnesium to aluminum alloys and tells us that addition of magnesium may provide good salt water and alkaline corrosion resistance of aluminum alloys (page 420). Nevertheless, a plausible argument may be made that addition of magnesium produces a truly

unexpected result, namely, corrosion resistance in the range of 0.0001-0.0002%, which is lower than the industry standard as described in both the Roe and Doe applications. See Roe specification, Table I, Examples 9 and 10. On the other hand, an examiner may take the position that notwithstanding the data in Table I, the showing of unexpected properties is not commensurate in scope with the breadth of Roe claim 9. Compare In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978) (showing of unexpected results must be commensurate in scope with breadth of claim); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990) (same); In re Lintner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972) (same). Thus, the examiner might take the position that Roe claim 9 encompasses both subject matter which is obvious in view of the count and subject matter which is non-obvious subject matter in view of the count. If a claim includes subject matter which is obvious in view of the count, the claim is designated as corresponding to the count even if the claim also includes subject matter which would not be obvious in view of the count. Compare In re Muchmore, 433 F.2d 824, 167 USPQ 681 (CCPA 1970) (claims which include obvious subject matter and non-obvious subject matter are not patentable under § 103).

6. Many Rule 609(b) statements received by the board in the past propose to designate a claim as corresponding to a count because (1) the count "dominates" the subject matter of the claim or (2) the claim is "encompassed" by the count. The mere fact that one claim "dominates" another claim does not mean that both claims are directed to the same patentable invention. A claim 1 to polypropylene and a claim 2 to polypropylene containing a stabilizer are not necessarily the same patentable invention even though claim 1 "dominates" claim 2. A claim 3 to a motor "encompasses" a claim 4 to a motor with a starter, but it does not necessarily follow that claim 3 and claim 4 are necessarily the same patentable invention.

#### H. Criteria for benefit of earlier filing date

##### 1. Patentability

An examiner may find a prior art reference having an effective prior art date between (1) the filing date of an application and (2) the filing date of a "parent" or a foreign priority application. To be entitled to the benefit of the filing date of the "parent" application, applicant must demonstrate that the subject matter claimed in its application is described in the parent. In re Ahlbrecht, 435 F.2d 908, 168 USPQ 293 (CCPA 1971); In re Lukach, 442 F.2d 967, 169 USPQ 795 (CCPA 1971); and In re Smith, 458 F.2d 1389, 173 USPQ 679 (CCPA 1972).

The same is true when an application claims the benefit of a filing date of a foreign application. In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

The burden is on the applicant to establish its entitlement to an earlier date. In re Ziegler, 992 F.2d 1197, 26 USPQ2d 1600 (Fed. Cir. 1993).

If a later filed application describes and claims ranges of 2-12 and 3-12, and an earlier application (U.S. or foreign) describes only a range of 3-12, claims directed to the range of 2-12 are not entitled to the benefit of the filing date of the earlier application under 35 U.S.C. §§ 119 or 120 for the purpose of patentability. Claims to a range of 3-12 would be entitled to the benefit of the filing date of the earlier application for the purpose of patentability.

## 2. Priority

Benefit for the purpose of priority is another matter.

An applicant is entitled to benefit for the purpose of priority (i.e., for the purpose of filling out the PTO Form 850) if the benefit application (U.S. or foreign) describes an enabling embodiment within the scope of the count. See Den Beste v. Martin, 252 F.2d 302, 116 USPQ 584 (CCPA 1958) (enabling description of one species within count is sufficient for benefit for the purpose of priority); Hunt v. Treppschuh, 523 F.2d 1386, 1389, 187 USPQ 426, 429 (CCPA 1975) (an application need only disclose a single enabled embodiment within the scope of the count to constitute a constructive reduction to practice of the invention of the count).

Note that Den Beste v. Martin has been overruled in part, or at least is not to be followed, to the extent it can be read to authorize a party to copy a claim for the purpose of an interference solely on the basis of an enabling description of a single species without also having support for the full scope of the claim being copied. Squires v. Corbett, 560 F.2d 424, 194 USPQ 513, 520 (CCPA 1977).

The party seeking benefit has the burden of proof. Wagoner v. Barger, 463 F.2d 1377, 175 USPQ 85 (CCPA 1972) (burden of proving entitlement to filing date of earlier application is on party asserting benefit, whether it be senior or junior party).

## 3. Why is there a difference between priority and patentability?

There is a reason only one enabling embodiment need be described in an interference--it defeats the opponent's right to a patent.

In ex parte examination, on the other hand, an applicant is attempting to establish its right to a patent over the prior art. In an interference, the applicant is attempting to defeat its opponent's right to a patent.

#### 4. Unusual circumstances in interference cases

Unusual circumstances can develop in interference cases.

Suppose the senior party is senior party because it has been accorded the benefit of an earlier application (U.S. or foreign) and further suppose that the junior party is a U.S. patent having a filing date between the senior party's filing date and benefit date.

Under these circumstances, the senior party must establish its right to benefit of the earlier application under both the patentability and priority standards. If the applicant does not establish its right to priority under the patentability standards, any claim not entitled to benefit is unpatentable over the junior party patent. Thus, a description of one species in the benefit application might entitle the senior party to priority (i.e., defeat its opponent), but the senior party still would not prevail on its broad claims because those claims are not patentable over the junior party patent unless the subject matter of the claim is described in the benefit application and/or the senior party has some manner of antedating the junior party patent.

#### Example

Party A files in France. Within one year, Party A files in the U.S. After Party A files in France and before Party A files in the U.S., Party B files in the U.S. Party B's application issues as a patent.

Party A's application in France describes a range of 4-10 and has examples to embodiments with ranges of 4, 7 and 9.

Party A's application in the U.S. broadens the range to describe a range of 2-15, and has examples of embodiments with a ranges of 2, 4, 7, 9 and 11. Party A's U.S. application contains (1) claim 1 to a range of 2-15 and (2) claim 2 to a range of 4.

Party B's patent describes a range of 4-6 and describes an example with a range of 4. It contains (1) claim 1 to a range of 4-6 and (2) claim 2 to a range of 4.

Party B's patent is prima facie prior art against Party A's application. 35 U.S.C. § 102(e). Party A can overcome the prior art effect of Party B's patent by claiming and being accorded priority of its earlier filed French application.

Party A cannot obtain priority for the claim because a range of 2-15 is not described in the French patent application. Hence, Party A's claim to a range of 2-15 is unpatentable under 35 U.S.C. § 102(e) over Party B's patent.

Party A may obtain priority for the claim to the range of 4, because the French patent describes a range of 4 (in fact, it describes an example with a range of 4).

The count of any interference between Party A and Party B will be:

A composition according to claim 2 of Party A

or

a composition according to claim 1 of Party B.

Party A's claim 1 (unpatentable) and claim 2 (patentable) correspond to the count. Party B's claims 1 and 2 (patentable) correspond to the count.

#### **I. Use of proper "patentese"**

1. Claims are unpatentable.
2. Subject matter would have been obvious.
3. Thus, it is not entirely correct to say that claims are or are not "obvious" or "nonobvious."
4. Nor is it proper to say subject matter "is" obvious given that 35 U.S.C. § 103 requires a determination to be made as of the date the invention was made (i.e., applicant's filing date). Hence, the proper terminology is that the claimed subject "would have been" obvious.

**FILE ORDERING**  
order patent files results

P

Tuesday  
10/24/00  
11:15:53 AM  
WFO1003PR

Serial# **08/642010** *File order accepted*  
Patent# **5767948**

Place another order

**FILE ORDERING**  
order patent files results



Tuesday  
10/24/00  
11:14:16 AM  
WFO1003PR

Serial# **08/935455** *File order accepted*

Place another order

**SECTOR 6**  
**INTERFERENCE DECLARATION CHECKLIST**

Date: \_\_\_\_\_

Examiner: \_\_\_\_\_

Serial No(s): \_\_\_\_\_

Patent No(s): \_\_\_\_\_

Yes or No or N/A

☒ If an applicant (including a reissue applicant) has copied claims from a patent, patentee has been notified that its claims have been copied. Form paragraph 11.19, found in MPEP 2307.06, is designed to be used in this situation.  
NOTE: Even if interference is not declared where patent claims have been copied by an applicant, form paragraph 11.20, also found in MPEP 2307.06, should be used to notify patentee that one or more of its claims have been copied.

☒ If further action by the Office is to be suspended in a pending application which may be set up in an interference, e.g., where applicant has responded to all outstanding Office actions on the merits and the application is coming up on an examiner's docket for further action, the examiner has suspended further action by the Office in the application until the issue of interference declaration is resolved, e.g., by using form paragraph 7.53, "Suspension of Action, Possible Interference," found in MPEP 709.

→ 11 months  
\_\_\_\_\_ Difference in effective filing dates between applications is more than 6 months, requiring signature of Group Director on Form PTO-850. See MPEP 2303, 2d paragraph.

☒ Proposed interference involves more than one patent, requiring signature of Group Director on Form PTO-850. See MPEP 2306, 4th paragraph.

☒ Forward file of each involved application and each application for which benefit was accorded under 35 USC 120.

☒ Form PTO-850 is signed by a Primary Examiner.

☒ If interfering applications or patents are commonly assigned, only an Administrative Patent Judge may determine if good and sufficient cause exists to declare a patent interference proceeding.



- ☒ If only applications are involved and neither is in condition for allowance, the Group Director's approval must be obtained to set up an interference proceeding.
- ☒ All amendments have been considered and acted upon (e.g., entered or not entered) and amendments presenting claims corresponding to a count have been entered in whole or in part.
- ☒ Any conversion of inventorship papers under 37 CFR 1.48 have been acted upon.
- ☒ Every pending claim of each involved application or every patent claim is listed on Form PTO-850 as either corresponding or not corresponding to each proposed count. See MPEP 2309.02
- ☒ The Form PTO-850 contains an indication (written in parenthesis next to each claim number) for each claim of each involved application as to whether or not it is allowable or not allowable. See MPEP 2309.02
- ☐ The count language is specified by typing it up on a sheet of paper and attaching it to the Form PTO-850.
- ☒ If there are two or more proposed counts, the examiner has specified why each proposed count defines a separate patentable (i.e., patentably distinct) invention from every other proposed count.
- ☒ For each proposed count, the examiner has identified the claims of each directly involved application or patent which correspond to each count, and has explained why each claim designated as corresponding to a particular proposed count is directed to the same patentable invention as the proposed count (i.e., is not patentably distinct from the subject matter of the proposed count). NOTE: A benefit application or patent is not directly involved in the interference.
- ☒ For each proposed count, the examiner has identified the claims of each directly involved application or patent which do not correspond to that proposed count, and has explained why each claim designated as not corresponding to a particular proposed count is not directed to the same patentable invention as that proposed count. NOTE: A benefit application or patent is not directly involved in the interference.
- ☒ No patent has been accorded the benefit of a foreign application, with respect to which it claims priority under 35 USC 119, if an application with which the patent is to be placed in interference has an effective filing date

subsequent to the filing date of that foreign application. See MPEP 2308.01, first paragraph, and 2309.02. This often means that the foreign applications for which priority is claimed in a patent are **not** listed on the Form PTO-850.

- For an application to be accorded benefit of an earlier filed application under 35 USC 119, priority papers (including a proper translation of a foreign language priority application) are of record in the application file.
- The applicant has complied with the provisions of 37 CFR 1.608(a) if the effective filing date of the application is three (3) months or less after the effective filing date of the patent. See MPEP 2308.01.
- The applicant has complied with the provisions of 37 CFR 1.608(b) if the effective filing date of the application is more than three (3) months after the effective filing date of the patent. See MPEP 2308.01.
- ✓ — At least one application claim corresponding to a proposed count must be indicated to be allowable not only on the Form PTO-850, but also on the record in that application, e.g., in an Office Action or in a letter to applicant. You may consider using form paragraph 7.53 (reproduced in MPEP Section 709), if appropriate, on a Form PTOL-90, to fulfill this requirement if the application file does not already do so.
- ✓ — The proposed count embraces the broadest patentable claim of each party which defines some patentable invention as the proposed count.
- ✓ — If a patentee is to be one of the parties to an interference, the patent is not expired, e.g., for failure to timely pay maintenance fees. Current maintenance fee information for each involved patent (available on PALM using the CR06 screen) was checked in the Group and the patent(s) determined not to have expired. Maintenance fee requirements are set forth in 37 CFR 1.362 through 1.378 and affect applications filed on or after December 12, 1980. Fee (including surcharge) amounts are found at 37 CFR 1.20(e) through (i)).

RJW 01/97

This checklist was prepared by Robert J. Webster, Special Program Examiner.

**INTERFERENCE INITIAL MEMORANDUM**

**BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:**

This interference involves \_\_\_\_\_ parties

PARTY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
If application has been patented, have maintenance fees been paid? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maintenance fees not due yet				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
The claim(s) of this party which correspond(s) to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS		UNPATENTABLE PENDING CLAIMS		
The claim(s) of this party which does(do) not correspond to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS		UNPATENTABLE PENDING CLAIMS		

PARTY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
If application has been patented, have maintenance fees been paid? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maintenance fees not due yet				
**Accorded the benefit of:				
COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
The claim(s) of this party which correspond(s) to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS		UNPATENTABLE PENDING CLAIMS		
The claim(s) of this party which does(do) not correspond to this count is(are): PATENTED OR PATENTABLE PENDING CLAIMS		UNPATENTABLE PENDING CLAIMS		

**Instructions**

1. For every patent involved in the interference, check if the maintenance fees have been paid by using the patent number with PALM screen 2970. If fees are due and they have not been paid, the interference cannot be declared since it would involve an expired patent (35 USC 135(a); 37 CFR 1.606).
2. For each party, identify the patentable (or patented) and unpatentable (pending) claims which correspond to the count (37 CFR 1.601(f), (n); 1.609(b)(2)).
3. For each party, identify the patentable (or patented) and unpatentable (pending) claims which do not correspond to the count (37 CFR 1.609(b)(3)).
4. Forward all files including those the benefit of which is being accorded.
5. Keep a copy of the Interference Initial Memorandum and any attachments for your records.

All information requested below must be attached on (a) separate typewritten sheet(s).

6. On a separate sheet, set forth a single proposed interference count. If any claim of any party is exactly the same word for word as this count, please indicate the party, application or patent number, and the claim number.
7. For each claim designated as corresponding to the count, provide an explanation of why each claim defines the same patentable invention as the count (37 CFR 1.609(b)(2)).
8. For each claim designated as not corresponding to the count, provide an explanation of why each claim defines a separate patentable invention from the count (37 CFR 1.609(b)(3)).
9. For each additional count, if any, repeat steps 2-6 and, additionally, provide an explanation why each count represents a separate patentable invention from every other count (37 CFR 1.609(b)(1)).

DATE	PRIMARY EXAMINER (Signature)	TELEPHONE NO.	ART UNIT
DATE	GROUP DIRECTOR SIGNATURE (if required)		

The application number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest application if there are intervening applications necessary for continuity.

**THIS PAGE CAN BE DUPLICATED IF THERE ARE MORE THAN TWO INTERFERING PARTIES.**

## INTERFERENCE INITIAL MEMORANDUM

Count # 1

BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:

This interference involves 2 parties

104020

PARTY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
Futatsusi (2)	08/604063	2/20/97		

If application has been patented, have maintenance fees been paid? Yes No Maintenance fees not due yet

\*\*Accorded the benefit of:

COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
U.S.	08/118373	9/8/93	5,503,564	4/2/96

The claim(s) of this party which correspond(s) to this count is(are):

PATENTED OR PATENTABLE PENDING CLAIMS

20, 25-28, 31, 33, 34, 37, 39-41, 43

UNPATENTABLE PENDING CLAIMS

32, 34, 35, 38, 42

The claim(s) of this party which does(do) not correspond to this count is(are):

PATENTED OR PATENTABLE PENDING CLAIMS

21-24, 29, 30

UNPATENTABLE PENDING CLAIMS

-

PARTY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY
Shuey (1)	08/131212	10/1/93	5,451,168	9/19/95

If application has been patented, have maintenance fees been paid? Yes No X Maintenance fees not due yet

\*\*Accorded the benefit of:

COUNTRY	APPLICATION NO.	FILING DATE	PATENT NO., IF ANY	ISSUE DATE, IF ANY

The claim(s) of this party which correspond(s) to this count is(are):

PATENTED OR PATENTABLE PENDING CLAIMS

19-36, 40, 41

UNPATENTABLE PENDING CLAIMS

The claim(s) of this party which does(do) not correspond to this count is(are):

PATENTED OR PATENTABLE PENDING CLAIMS

1-18, 37-39

UNPATENTABLE PENDING CLAIMS

RECEIVED

SEP 15 1997

BOARD OF PATENT APPEALS  
AND INTERFERENCES

## Instructions

- For every patent involved in the interference, check if the maintenance fees have been paid by using the patent number with PALM screen 2970. If fees are due and they have not been paid, the interference cannot be declared since it would involve an expired patent (35 USC 135(a); 37 CFR 1.606).
- For each party, identify the patentable (or patented) and unpatentable (pending) claims which correspond to the count (37 CFR 1.601(f), (n); 1.609(b)(2)).
- For each party, identify the patentable (or patented) and unpatentable (pending) claims which do not correspond to the count (37 CFR 1.609(b)(3)).
- Forward all files including those the benefit of which is being accorded.
- Keep a copy of the Interference Initial Memorandum and any attachments for your records.

All information requested below must be attached on (a) separate typewritten sheet(s).

- On a separate sheet, set forth a single proposed interference count. If any claim of any party is exactly the same word for word as this count, please indicate the party, application or patent number, and the claim number.
- For each claim designated as corresponding to the count, provide an explanation of why each claim defines the same patentable invention as the count (37 CFR 1.609(b)(2)).
- For each claim designated as not corresponding to the count, provide an explanation of why each claim defines a separate patentable invention from the count (37 CFR 1.609(b)(3)).
- For each additional count, if any, repeat steps 2-6 and, additionally, provide an explanation why each count represents a separate patentable invention from every other count (37 CFR 1.609(b)(1)).

DATE 9/8/97	PRIMARY EXAMINER (Signature) Judy Trueman	TELEPHONE NO. 306-4115	ART UNIT 3202
DATE	GROUP DIRECTOR SIGNATURE (if required)		

\*The application number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest application if there are intervening applications necessary for continuity.

THIS PAGE CAN BE DUPLICATED IF THERE ARE MORE THAN TWO INTERFERING PARTIES.

Page 1 of 1

**COUNT**

Claim 31 of Application 08/604063 to Futatsugi et al.

Or

Claim 19 of U. S. Patent 5,451,168 to Shuey

Both claims read as follows:

A one-piece integrated metallic frame for use in a connector apparatus for plate-like integrated circuit cards, comprising: a cross member, and a pair of guide rails integrally formed with said cross member and extending therefrom in at least one direction, said guide rails being spaced at an interval substantially equal to a width of a plate-like integrated circuit card, at least one of the guide rails having push rod mounting means integrally formed on said one-piece frame.

## **CLAIMS CORRESPONDING TO THE COUNT**

**Why claims 20, 25-28, 31-43 of Application 08/604063 correspond to the count (although claims 32, 34, 35, 38, 42 are not patentable to applicant):**

Claims 31, 36, 39, 43--Claim 31, and method claim 39 are the language of the count claim. Claim 36 adds method limitations only to an apparatus claim, adding no new apparatus limitations, and claim 43 is an old and well known method step in creating sheet metal blanks.

Claim 32--Claim 32 is drawn to the limitation of a mounting means including a slot and tab connection, which is shown by the Yoshida et al element 41, wherein a tab on 41 mates with an elongated slot (18) in the frame. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Yoshida's tab and slot connection to the device of the count claim, because the tab being closely guided by the slot allows smooth, guided movement of a rod portion while allowing force on the rod to act only in the direction of the slot, conserving energy.

Claims 35, 37, 38, 40--These claims are drawn to a u-shaped rail configuration, an opening in the cross member, and an aperture in the cross member for connection of a lever to the device. These features are shown by Komatsu (5,051,101) wherein 19 is part of a u-shaped rail, and 24 is an opening or aperture in a cross member for connection of a lever bar (22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the count claim with Komatsu's u-shaped rails, because the u-shape provides support to an insertable card around its periphery on both sides, and to provide the count claim with Komatsu's opening, to allow the lever to be guided by the cross member while being movable to allow the ejection means to operate.

Claims 33, 34, 41, 42--These claims are drawn to the limitation of spring and ground contacts on a guide rail. Valfre discloses a connecting device including the teaching of spring contacts (19, 20) being located on a guide rail (3, 4) for mating with the device (16, 21, 22) to be inserted into the guide rail frame. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the count claim with spring contacts on the guide frame, as taught by Valfre, such that the guide rail would ensure good connection between contacts located directly on the guide and contacts to mate with guide portions. With regard to the provision of one of the contacts being a static discharge (ground), and one mating with a type III memory card, the exact contacts to be utilized would be at the purview of one skilled in the art, to accomplish the task required by the contacts and current generated thereby.

Claims 20, 25-28--Claims 20, 25 and 28 recite the limitation of the lever bar directly engaging the card for ejecting. Komatsu discloses a lever bar for ejecting a card with a plate. It is old and well known within the art, and thus, it would have been within the purview of one ordinarily skilled in the art to eliminate the connecting plate allow the lever directly engage the card, to eliminate additional unneeded structure which may require replacement or repair. Claim 28 also requires a

retaining section and tabs extending outwardly from the frame for retaining a push bar, which is shown by Komatsu (elements 29, portion of 27, and 28). It would have been obvious at the time the invention was made to a person of ordinary skill in the art to locate a retaining means for the push bar of the count claim outside of the frame, and to hold it with a retaining means as taught by Komatsu, because the frame is for enclosing the mating card, and leaves no room for the push bar, such that an additional retaining means to hold the bar relative to the frame is needed.

**Why claims 21-24, 29, 30 of Application 08/604063 do not correspond to the count:**

Claims 21-24, 29, 30--Claims 21, 29 recite limitations drawn to a housing, contacts, and the manner in which the housing is secured to the ejector unit, including lugs and mounting members which are not found in the count claim or cited art. Claims 22-24 depend from claim 21.

**Why claims 19-36, 40, 41 of Patent number 5,451,168 correspond to the count:**

Claims 19, 25, 30, 34--These claims are identical to claims 31, 36, 39, 43 of the application, and read on the count claim as set forth above.

Claim 20--Claim 20 is identical to application claim 32, and would read on the count claim in view of Yoshida et al as set forth above.

Claims 24, 26, 27, 31--These claims are identical to claims 35, 37, 38, 40 of the application claims, and would read on the count claim in view of Komatsu as set forth above.

Claims 35, 36, 40, 41--These claims do not correspond to claims in the application, but they recite limitations including coupling an ejector plate to the frame and to a cross member, which are shown by Komatsu (ejector plate 8 being coupled to lever 22 at 16), and coupling the lever to the push rod with a tab-and-slot mechanism, which is taught by Komatsu at the joint between elements 22 and 32. Note that one of ordinary skill would have been able to locate the tab on the push rod and the slot on the lever, as a simple reversal of parts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the count claim with Komatsu's ejector plate and lever combination, to allow the claimed push rod to eject a device from the connector apparatus, such that the apparatus may be used with a variety of connectors. It would further have been obvious to provide the count claim with the specific tab and slot connection of Komatsu, to connect the push rod and lever in a quick and efficient manner, which may be disconnected as needed for replacing parts.

Claims 22, 23, 32, 33--These claims are identical to claims 33, 34, 41, 42 of the application claims, and would read on the count claim in view of Valfre as set forth above.

Claims 21, 28, 29--Claims 21, 29 do not correspond to claims from the application. These claims recite an additional push rod, and an additional opening, which constitute a duplication of existing parts, which is within the purview of one of ordinary skill. Claim 28 recites a specific shape for an opening, to mate with a specific shape of a projection through the opening. It would have been obvious to one of ordinary skill to shape an opening to accommodate and fit the shape of an

object which is meant to project through it.

**Why claims 1-18, 37-39 of Patent number 5,451,168 do not correspond to the count:**

Claims 1-18--Claim 1 contains the additional patentable limitations of a contact header with contacts, an ejector plate, and lever connection, which are not found in the count claim. Claims 2-18 depend from claim 1.

Claims 37-39--Claim 37 recites further limitations relating to mounting of a push rod, including method steps of mounting tabs from the push rod in slots in the guide rail, which would require modification of a modifying reference (modifying Komatsu). Claim 38 recites limitation of positioning an ejector plate opposite a lever, and claim 39 recites aligning tabs with radial slots in the cross member, not found in the additional references.



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PATENTEE'S COMMENTS  
ON OPPOSITION IN EUROPEAN  
COUNTERPART TO 9419 PATENT 2208 oppo

14 September 2001

Dear Sirs

European Patent 0 772 800  
formerly Application No. 96903180.6  
ASM LITHOGRAPHY BV  
Opposed by Prof. Dr.-Ing. Alexander W Koch  
Our Ref. C.76438 JGL/amg

Having received the sworn translation of JP-A-6-140305 (D4) we write to provide our comments on the Opposition.

A duplicate of this letter for the Opponent is enclosed.

Requests

1. Our main request is that the opposed patent be maintained as granted and the Opposition dismissed in its entirety.
2. As an auxiliary request we request that Oral Proceedings be held if our main request cannot be granted without them.

Inventive Step

3. The sole ground of opposition is that the claims of the opposed patent lack an inventive step - there is no suggestion of a lack of novelty. Accordingly, we comment below only on inventive step, first discussing the disclosure of D4.

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D4 - JP-A-6-140305

4. The opponent in his statement of facts and arguments refers to integers described in D4 which their original computer translation renders as "driving gear 24 for a relative scanning" and "driving gear 25 for a jogging control". The opponent notes that a permanent magnet is embedded in the "reticle side scanning stage 20" and this is said to be "driven by the linear motor method". The opponent then concludes that driving gear 24 is a linear motor and that driving gear 25 is also a linear motor.
5. However, the logic of this argument is false and the conclusion is contradicted by the sworn translation of D4 filed by the opponent himself.
6. The logic of the opponent's arguments is equivalent to : there are two dogs, one of the dogs is a poodle, therefore the other dog is a poodle. Such an argument would only be correct if the terms "dog" and "poodle" were exactly synonymous. Clearly they are not. Likewise, it is clear that "driving gear" is not synonymous with "linear motor". The fact that the "driving gear 24" possibly includes a linear motor is not basis for concluding that the terms are synonymous nor for concluding that the machine translation has translated "linear motor" as "driving gear".
7. As to the sworn translation of D4, it will be seen that this renders the relevant integers of D4 as "relative scanning drive apparatus 24" and "fine adjustment control drive apparatus 25". Paragraph 0021 describes that the reticle-side scanning stage 20 "is driven in the X direction by a linear motor method" which allows one to conclude that the "relative scanning drive apparatus 24" includes a linear motor; this does not lead to the conclusion that the term "drive apparatus" in D4 is synonymous with "linear motor". To determine the exact constitution of the "fine adjustment control drive apparatus 25" the reader of D4 must turn to the passages dealing specifically with that integer. The relevant passages are: paragraph 0023, paragraph 0029 final sentence, paragraph 0033 first sentence, paragraph 0036 final sentence, paragraph 0040.
8. These passages, especially paragraph 0023, make it clear that the "fine adjustment control drive apparatus 25" consists of actuators 38, 40 and 42 and springs 37A, 37B, 39A, 39B and 41A, 41B. These are illustrated in Figure 2 as rods emerging from boxes and terminated by spheres engaging v-shaped notches on reticle-side fine adjustment stage 21. These actuators 38, 40 and 42 are manifestly not linear motors.
9. Thus, in addition to the machine frame, which the opponent admits is lacking in D4, D4 also does not disclose the first linear motor (feature 7) required by claim 1. D4 cannot therefore be considered the closest prior art.

Problem & Solution

10. The objective problem solved by the invention is to provide a drive arrangement for the mask stage of a lithographic device which avoids the problems of the prior art (see column 2 lines 53-56, paragraph 0005 of the opposed patent). Specifically it is desired to avoid overlay errors caused when the mask is displaced large distances against a straight guide whereby errors in the alignment of the straight guide are magnified. Additionally, it is desired to avoid vibrations caused by unevenness in the straight guide.
11. According to case law, the closest prior art is a document that suffers from or seeks to solve the objective problem. In this case, the closest prior art document is DE-A-43 33 620 (D3) considered during prosecution.
12. Compared to D3, the distinguishing features of the present invention are the features of the characterizing clause of claim 1, namely that the second (mask) positioning device comprises a first linear motor for displacing the mask holder small distances in X, Y and  $R_z$  (or  $\theta$ ) and a second linear motor for displacing the mask large distances in X. The present invention has an inventive step because it was not obvious to apply those features to solve the problem addressed by the present invention.
13. If the skilled person were to have considered D4 in seeking to solve the above objective problem, it is possible that the skilled person would have considered employing the mask stage drive arrangement of D4. As described above, those drive arrangements comprise a linear motor for large displacements in X but three actuators for small displacements in X, Y and  $R_z$ . Thus D4 would not assist the skilled person in arriving at the characterizing features of the present invention, which specifies two linear motors - one for small displacements in X, Y and  $R_z$  and the second for large displacements in X.
14. As to D5 (US 5,172,160), this document discloses a so-called step-and-repeat lithographic device in which the mask is held stationary and imaged in one shot. The device therefore has no scanning mechanism for the mask stage. D5 therefore provides no assistance to the skilled person.
15. D6 (US 5,260,580) discloses a moveable stage device, embodied as a wafer stage, not a mask stage, which seeks to address problems caused by vibrations induced when using a linear motor acting between a moveable stage and a stationary base and by dampers used to combat the vibrations. D6 proposes an arrangement whereby the moveable stage is driven by a first driving means which acts against the stationary base and a second driving means which acts against a second support independent of the stationary base. Both the first and second driving means may include linear motors but they have the same degrees of freedom and the same ranges of movements. The second linear motor 7 is used for speed control and the first for position control (column 5 lines 40-43) whereby the large

forces required for accelerations are channelled to the second support. Thus, D6 would not assist the skilled person in arriving at the present invention because it does not teach a first linear motor for X, Y and R<sub>z</sub> movements over small ranges and a second linear motor for X movements over a large range.

16. In addition it should be noted that D6 acts to deal with vibrations arriving from a different cause than those addressed by the invention of claim 1 and uses a different principle to effect a solution. In D6 the vibrations arise because of the need to rapidly accelerate and decelerate the stage and the principle of the solution taught by D6 is to channel as much as possible of those vibrations to a separate frame. In the present invention, the vibrations arise from the use of a straight guide. The invention eliminates this by the provision of a two-stage drive involving one linear motor for X, Y and R<sub>z</sub> movements over small ranges and a second one for X movements over a large range.
17. D7 (US 4,821,205) is also of no assistance to the skilled person. Although mention is made of the use of linear motors, this document does not disclose a two-tiered system and the described system is only applicable to the wafer stage, not the mask stage.
18. Accordingly, none of the prior art document discloses the use of two linear motors, one for small movements in X, Y and R<sub>z</sub> and the other for large movements in X, to position the mask in a lithographic projection apparatus. The present invention is therefore both novel and inventive.

#### Dependent Claims

19. Claims 2 to 7 all depend from, and are narrower in scope than, claim 1. We do not comment further on their inventive step at this stage since they are novel and inventive by virtue of their dependence on claim 1. Nevertheless, we comment that we do not accept the Opponent's arguments in relation to these claims and will provide detailed refutation should that become necessary.

Please acknowledge receipt of this letter by dating and returning the attached acknowledgement copy.

Yours faithfully

  
I.G. LEEMING  
AUTHORISED REPRESENTATIVE